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E-24 (Revised to Oct. 1923] PUBLICATIONS OF THE BUREAU OF ENTOMOLOGY, U. S. DEPARTMENT OF AVAILABLE FOR FREE DISTRIBUTION. FARMERS' BULLETINS. 440. Spraying peaches for control of brown-rot, scab, and curculio. 444. Remedies and preventives against mosquitoes. 450. Some facts about malaria. 605. Collection and preservation of insects and other material for use in the study of agriculture. 627. The house centipede. 636. The chalcis fly in alfalfa seed. 650. The San Jose scale and its control. 658. Cockroaches. 662. The apple-tree tent caterpillar. 663. The squash-vine borer. 674. Control of the citrus thrips in California and Arizona. 675. The roundheaded apple-tree borer. 691. Grasshoppers and their control on sugar beets and truck crops. 695. Outdoor wintering of bees. 699. Hydrocyanic-acid gas against household insects. 701. The bagworm, an injurious shade-tree insect. 705. The catalpa sphinx. 708. The leopard moth: A dangerous imported enemy of shade trees. 721. The rose-chafer: 722. The leaf blister mite of pear and apple. 723. The oyster-shell scale and the scurfy scale. 725. Wireworms destructive to cereal and forage crops. 731. The true army worm and its control. Flytraps and their operation. 734. Cutworms and their control in corn and other cereal crops. 739 -740. House ants: Kinds and methods of control. Grasshoppers and their control with relation to cereal and forage crops. 747. 752. The fall army worm or "grass worm" and its control. The bedbug. 754. 762. The false chinch bug and measures for controlling it. 763. Orchard barkbeetles and pinhole borers and how to control them. 766. The common cabbage worm. 778. Powder-post damage by Lyctus beetles to seasoned hardwood. 789. Mushroom pests and how to control them. 799. Carbon disulphid as an insecticide. 801. Mites and lice on poultry. 819. The tobacco budworm and its control. 831. The red spider on cotton and how to control it. 835. How to detect outbreaks of insects and save the grain crops. 837. The asparagus beetles and their control. 846. The tobacco beetle and how to prevent damage by it. 851. The house fly.

- 857. Screw-worms and other maggots affecting animals.
- 860. Cranberry insect problems and suggestions for solving them.
- 372. The bollworm or corn earworm.
- 875. The rough-headed corn stalk-beetle.
- 880. Fumigation of ornamental greenhouse plants with hydrocyanic-acid gas.
- 890. How insects affect the cotton plant and means of combating them.
- 891. The corn root-aphis and methods of controlling it.
- 897. Fleas and their control.
- 902. The silverfish: An injurious household insect.
- 908. Information for fruit growers about insecticides, spraying apparatus, and important insect pests.
- 914. Control of the melon aphis.
- 933. Spraying for the control of insects and mites attacking citrus trees in Florida.
- 940. Common white grubs.
- 944. Controlling the garden webworm in alfalfa fields.
- 950. The southern corn rootworm and farm practices to control it.
- 959. The spotted garden slug.
- 961. Transferring bees to modern hives.
- 971. The control of the clover-flower midge.
- 975. The control of European foulbrood.
- 982. Control of the green clover worm in alfalfa fields.
- 1003. How to control billbugs destructive to cereal and forage crops.
- 1006. The jointworm and its control.
- 1007. Control of the onion thrips.
- 1011. The woolly white fly in Florida citrus groves.
- 1012. Preparation of bees for outdoor wintering.
- 1014. Wintering bees in cellars.
- 1020. The sweet-potato weevil and its control.
- 1025. The larger corn stalk-borer.
- 1029. Conserving corn from weevils in the Gulf Coast States.
- 1037. White ants as pests in the United States and methods of preventing their damage.
- 1039. Commercial comb-honey production.
- 1056. Controlling important fungous and insect enemies of the pear in the humid sections of the Pacific Northwest.
- 1061. Harlequin cabbage bug and its control.
- 1065. The flatheaded apple-tree borer.
- 1070. The fowl tick and how premises may be freed from it.
- 1074. The bean ladybird and its control.
- 1076. California oakworm.
- 1083. The Hessian fly and how to prevent losses from it.
- 1084. Control of American foulbrood.
- 1086. How insects affect the rice crop.
- 1094. The alfalfa caterpillar.
- 1097. The stable fly: How to prevent its annoyance and its losses to live stock.
- 1101. The Argentine ant as a household pest.
- 1104. Book-lice or psocids: Annoying household pests.
- 1128. Control of aphids injurious to orchard fruits, current, gooseberry, and grape.

- 1140. Grasshopper control in the Pacific States.
- 1154. Aspen borer and how to control it.
- 1156. Angounois grain moth.
- 1169. Insects injurious to deciduous shade trees and their control.
- 1185. Spraying for the alfalfa weevil.
- 1188. The southern pine beetle: A menace to the pine timber of the Southern States.
- 1193. The beet leaf-beetle and its control.
- 1197. Protection of mesquite cordwood and posts from borers.
- 1198. Swarm control.
- 1206. The corn earworm as an enamy of vetch.
- 1215. Backeeping in the clover region.
- 1216. Beekeeping in the buckwheat region.
- 1217. The green-bug or spring grain-aphis: How to prevent its periodical outbreaks.
- 1220. Insect and fungous enemies of the grape.
- 1222. Beekeeping in the tulip-tree region.
- 1223. The chinch bug and its control.
- 1225. The potato leafhopper and its control.
- 1246. The peach borer.
- 1252. Sawflies injurious to rose foliage.
- 1257. Insects injurious to the mango in Florida and how to combat them.
- 1258. Webworms injurious to cereal and forage crops and their control.
- 1259. A sawfly injurious to young pines.
- 1260. Stored grain pests.
- 1261. The avocado: Its insect enemies and how to combat them.
- 1270. The more important apple insects.
- 1275. Weevils in beans and peas.
- 1282. Nicotine dust for control of truck-crop insects.
- 1285. Lime-sulphur concentrate: Preparation, uses, and designs for plants.
- 1286: The red-necked raspoerry cane-borer.
- 1294. The European corn borer and its control.
- 1306. Insect enemies of chrysanthemums.
- 1309. Control of the common mealybug on citrus in California.
- 1310. The corn earworm: Its ravages on field corn and suggestions for control.
- 1319. Cotton dusting machinery.
- 1321. Fumigation of citrus trees for control of insect pests.
- 1322. The striped cucumber beetle and how to control it.
- 1323. The wheat strawworm and its control.
- 1329. The boll weevil problem.
- 1335. Controlling the gipsy moth and the brown-tail moth.
- 1344. The strawberry roctworm as an enemy of the greenhouse rose.
- 1346. Carpet beetles and their control.
- 1349. Increasing the potato crop by spraying.
- 1352. The tobacco flea-beetle in the southern cigar-wrapper district.
- 1353. Clothes moths and their control.
- 1354. The yellow-fever mosquito. (In press.)
- 1356. Tobacco hornworm insecticide: Recommendations for use of powdered arsenate of lead in dark-tobacco district.

1362. Insects injurious to ornamental greenhouse plants and their control. (In press.)

Important pecan insects and their control. (In press.)
Diseases and insects of garden vegetables. (In press.) 1364.

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#### DEPARTMENT BULLETINS.

Most of these are professional papers intended for the use of entomologists.

- \*8. The western corn root-worm.
- \*14. The migratory habit of housefly larvae as indicating a favorable remedial measure: An account of progress.
- \*59. The tobacco splitworm.
- 93. The temperature of the honeybee cluster in winter.
- 95. Insect damage to the cones and seeds of Pacific Coast conifers.
- \*100. Walnut aphides in California,
- 111. The Sequoia pitch moth: A menace to pine in western Montana.
- \*113. The lesser bud-moth.
- \*124. The alfalfa caterpillar.
- \*131. Repellents for protecting animals from the attacks of flies.
- \*134. Citrus fruit insects in Mediterranean countries.
- 161. The Mediterranean fruit fly in Bermuda.
- 170. The European pine-shoot moth.
- \*173. The life history and habits of the pear thrips in California.
- \*184. The huisache girdler.
- \*233. Relation of the Arizona wild cotton weevil to cotton planting in the arid West.
- \*245. Further experiments in the destruction of fly larvae in horse manure.
- \*264. The violet rove beetle.
- \*295. The Zimmerman pine moth.
- \*382. Cotton-boll weevil control in the Mississippi delta, with special reference to square picking and weevil picking.
- \*443. The New Mexico range caterpillar and its control.
- \*491. The melon fly in Hawaii.
- 550. Control of the grape-berry moth in the Erie-Chautauqua grape belt.
- \*564. Collection of weevils and infested squares as a means of control of the cotton-boll weevil in the Mississippi delta.
- 537. Some biological and control studies of Gastrophilus naemorrhoidalis and other bots of horses.
- 640. The Mediterranean fruit fly.
- 723. The pink bollworm with special reference to steps taken by the Department of Agriculture to prevent its establishment in the United States.
- 787. Protection from the locust borer.
- 796. Use of toxic gases as a possible means of control of the peach-tree borer.
- 808. Studies on the life-history and habits of the jointworm flies of the genus Harmolita, with recommendations for control.
- 826. Generic classification of the hemipterous family Aphididae.
- 838. Cypress bark scale.
- 341. The western grass-stem sawfly.
- 872. Insect control in flour mills.
- 893. Experiments on the toxic action of certain gases on insects, seeds, and fungi.
- 914. The red-banded leaf-roller.

<sup>\*</sup>In the Bureau of Entomology only.



- 918. Report on investigations of the pink bollworm of cotton in Mexico.
- 926. Studies in the biology of the Mexican cotton boll weevil in short-staple upland, long-staple upland, and Sea Island cottons.
- 965. Control of the Argentine ant in California citrus orchards.
- 967. Results of work on blister beetles in Mansas.
- 986. Studies on the biology and control of chiggers.
- 992. Walnut husk-maggot.
- 1008. Rate of multiplication of the Hessian fly.
- 1016. Bionomics of the chinch bug.
- 1028. Apanteles melanoscelus, an imported parasite of the gipsy moth.
- 1032. The blackhead fireworm of cranberry on the Pacific Coast.
- 1035. The red spider on the avocado.
- 1040. Control of the citrophilous mealybug.
- 1066. Curculios that attack the young fruits and shoots of walnut and hickory.
- 1076. Biology of the lotus borer (Pyrausta penitalis Grote).
- 1079. Experiments with spray solutions for preventing insect injury to green logs.
- 1080. Effect of low temperature on the hatching of gipsy-moth eggs.
- 1085. Broad-no sed grain weevil.
- 1083. Zygobothria nidicola, an important parasite of the brown-tail moth.
- 1093. The gipsy moth on cranberry bogs.
- 1107. The lead-cable borer or "short-circuit bettle" in California.
- 1115. Chemical changes in calcium arsenate during storage.
- 1117. Natural control of the citrus mealyoug in Florida.
- 1137. Symptoms of the rosette of wheat compared with those produced by certain insect pests.
- 1147. Chemical, physical, and insecticidal properties of arsenicals.
- 1149. Absorption and retention of hydrocyanic acid by fumigated food products.
- 1160. Studies on contact insecticides.
- 1169. Further studies with paradichlorobenzene for peach-borer control, with special reference to its use on young peach trees.
- 1182. The imported pine sawfly. (In press.)
- 1201. Plants tested for, or reported to possess insecticidal properties.

  (In press.)
- 1204. Dusting cotton from airplanes. (In press.)
- 1205. Dusting and spraying peach trees after harvest for control of the plum curculio. (In press.)



#### DEPARTMENT CIRCULARS.

- 167. The satin moth: An introduced enemy of poplars and villows.
- 172. The range crane-fly in California.
- 201. Hradication of the sweet-potato weevil in Florida.
- 210. Dispersion of the boll weevil in 1921.
- 213. Eradication of lice on pigeons.
- 215. Controlling the curculio, brown-rot, and scab in the peach belt of Georgia.
- 215. Occurrence of diseases of adult bees.
- 224. Nicotine dust for control of the striped cucumber beetle.
- 266. Dispersion of the boll weevil in 1922.
- 274. Dusting for the cotton boll weavil.
- 282. The Australian tomato weevil introduced in the South: A preliminary account.
- 287. The occurrence of diseases of adult bees, II. (In press.)
- 238. The puss caterpillar and the effects of its sting on man. (In press.)
- 294. The rat mite attacking man.

#### ENTOMOLOGY BULLETINS.

## (Discontinued in 1914.)

- \*85, Part II. The slender seed-corn ground-beetle.
- \*85, Part III. The clover-root curculio.
- \*95, Part II. The maize billbug.

#### ENTOMOLOGY TECHNICAL SERIES.

### (Discontinued in 1914.)

- \*19. Contents and Index.
- \*23. Part I. Some new California and Georgia Thysanoptera.
- \*24. The life history of the alder blight aphis.
- \*25. Part II. The yellow clover aphis,
- \*27. Part II. Classification of the Aleyrodidae, Part II.
- \*27. Contents and Index.

#### ENTOMOLOGY CIRCULARS.

### (Discontinued in 1914.)

- \*50. The white ant. (Superseded by Farmers' Bulletin 1037.)
- \*87. The Colorado potato beetle.
- \*101. The apple maggot or "railroad worm."
- \*123. Methods of controlling tobacco insects.
- \*131. How to control the pear thrips.
- 148. Two destructive Texas ants.
- \*153. The cotton worm or cotton caterpillar.
- \*158. The clover mite.
- \*168. Spraying for white flies in Florida. (Superseded by Farmers' Bulletin 933.)
  \*173. Arsenate of lead as an insecticide against the tobacco hornworms. (Super-
- \*Unnumbered. The pink bollworm. 1914. seded by Farmers' Bulletin 1356.)

#### REPORTS, OFFICE OF THE SECRETARY.

#### (Technical.)

- \*99. Classification of the Cryphalinae, with descriptions of new genera and species.
- \*101. The woolly apple aphis.
- \*102. Descriptions of some weevils reared from cotton in Peru.
- \*107. Larvae of the Prioninae.

#### CIRCULARS, OFFICE OF THE SECRETARY.

- \*51. The Hessian fly situation in 1915.
- \*55. The spring grain-aphis or "greenbug" in the Southwest and the possibilities of an outbreak in 1916.
- \*61. Important insects which may affect the health of man or animals engaged in military operations.

#### YEARBOOK SEPARATES.

- \*653. Edible snails.
- \*704. The practical use of the enemies of injurious insects.
- \*706. Suppression of the gipsy and brown-tail moths and its value to States not infested.

<sup>\*</sup>In the Bureau of Entomology only.

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#### LEAFLETS.

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- \*E 156. Spray potato fields.
- \*E 158. Garden plant-lice.

#### POSTERS.

\*E - 131. Chinch bug.

E - 141. Spraying apples (Northern States).

\*E - 144. Potato beetles.

E - 149. Destroy grasshoppers with poisoned-bran bait.

\*E - 152. Garden cutworms.

- E 155. Spray potato fields.
- \*E 157. Garden plant-lice.
- E 177. Hessian fly.
- E 178. Wheat jointworm.
- E 179. Alfalfa seed chalcis.

\*Help fight the European corn borer.

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